

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 and 2 (canceled)

3. (previously presented) A multi-electron beam exposure method according to Claim 12, wherein the Y-axis direction is partitioned in conformity to chip width, and a stripe subregion is repeatedly exposed according to the partitioned bit map data.

4. (previously presented) A multi-electron beam exposure method according to Claim 12, wherein while one of the stripe regions is exposed, the bit map data of a next stripe region is generated and saved.

Claims 5 and 6 (canceled)

7. (previously presented) A multi-electron beam exposure method according to Claim 12, wherein the width of said main fields in the X-axis direction is set to an integral submultiple of the chip size in the X-axis direction; and
each electron beam provides repeated exposure of same regions of said chips in the X-axis direction.

Claim 8 (canceled)

9. (previously presented) A multi-electron beam exposure apparatus according to Claim 14, wherein the bit map data of the exposure unit is the bit map data in the chip stripe regions obtained by partitioning a repeatedly exposed pattern by a width in a main deflector.

10. (previously presented) A multi-electron beam exposure apparatus according to Claim 14, wherein the pattern generation unit for generating the bit map data contains a correction unit for correcting distortion of the second means for deflecting electron beams.

11. (previously presented) A multi-electron beam exposure apparatus according to Claim 9, wherein the generation unit for generating said bit map data contains a correction unit for correcting distortion of a second deflector for deflecting electron beams.

12. (previously presented) A multi-electron beam exposure method, wherein multiple electron beams are applied to a sample surface mounted on a traveling sample stage to perform repeated exposure of chip patterns wherein the method comprises the steps of:

in a case that the sample surface is represented in an X-Y coordinate system, a continuous traveling direction of a sample stage is assumed as a Y-

axis direction, and the sample surface has a plurality of chips of the same kind located in a line at equal intervals respectively in the X and Y directions which are exposed;

partitioning an exposure region of the sample surface into multiple stripe regions having a width in the X-axis direction;

further partitioning each of the multiple stripe regions into multiple main fields having a width in the Y-axis direction;

setting at least one of the widths of the main fields in the X- and Y-axis directions to an integral submultiple of the chip size;

storing exposure pattern data for one chip based on the partitioned main fields as a unit; and

reading out the stored exposure pattern data a number of times corresponding to the number of the chips repeatedly;

wherein each electron beam provides repeated exposure of same regions of the chips.

13. (previously presented) A multi-electron beam exposure method according to Claim 12, wherein the width of said main fields in the Y-axis direction is set to an integral submultiple of the chip size in the Y-axis direction; and

each electron beam provides repeated exposure of the same regions of said chips in the Y-axis direction.

14. (currently amended) A multi-electron beam exposure apparatus comprising:

a deflector for deflecting multiple electron beams as one integral one and blanking means for providing independent control of application of said electron beams to a sample;

a pattern generation unit for expanding compressed pattern data and generating bit map data;

a storage unit for storing the generated bit map data in a form associated with said electron beams; and

an exposure control unit for controlling said blanking mean based on the stored bit map data;

wherein the storage unit consists of a double buffer memory unit that stores the bit map data in a next exposure unit region generated by the pattern generation unit, while the bit map data in the stored exposure unit region is repeatedly read out by the exposure control unit;

in a case that the sample surface is represented in an X-Y coordinate system, a continuous traveling direction of a sample stage is assumed as a Y-axis direction, and the sample surface has a plurality of chips of the same kind located in a line at equal intervals respectively in the X and Y directions which are exposed;

an exposure region of the sample surface is partitioned into multiple stripe regions having a width in the X-axis direction;

each of the multiple stripe regions is further partitioned into multiple main fields having a width in the Y-axis direction;

at least one of the widths of the main fields in the X- and Y-axis ~~direction-directions~~ is set to an integral submultiple of the chip size;

exposure pattern data for one chip are stored based on the partitioned main fields as a unit;

the stored exposure pattern data are readout a number of times corresponding to the number of the chips repeatedly; and

each electron beam provides repeated exposure of the same regions of said chips.